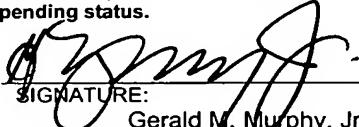


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| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>   |  | ATTORNEY'S DOCKET NUMBER<br>0230-0224PUS1                           |
| INTERNATIONAL APPLICATION NO.<br>PCT/JP2003/013629  | INTERNATIONAL FILING DATE<br>24 October 2003 | U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br><b>10/532876</b> |
| PRIORITY DATE CLAIMED<br>31 October 2002  |  |   |
| TITLE OF INVENTION CHIP-BASED PIEZOELECTRIC RESONATOR AND LIQUID-PHASE SENSOR   |  |   |
| APPLICANT(S) FOR DO/EO/US Hiroshi YOSHIMINE and Hiroyuki SOTA   |  |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |  |   |
| <p>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))</p> <p>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> has been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2))</p> <p>a. <input type="checkbox"/> is attached hereto.</p> <p>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))</p> <p>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input checked="" type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).</p> |  |   |
| Items 11 to 20 below concern document(s) or information included:   |  |   |
| <p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input type="checkbox"/> A preliminary amendment.</p> <p>14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information: PCT/IB/308; PCT/IB/304; PCT/IPEA/409; PCT/ISA/210; Letter submitting Article 34 Amendments.</p>  |  |   |

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| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/532876</b>   | INTERNATIONAL APPLICATION NO.<br>PCT/JP2003/013629 | ATTORNEY'S DOCKET NUMBER<br>0230-0224PUS1                                     |                  |
| The following fees have been submitted  |  | CALCULATIONS PTO USE ONLY   |                  |
| 21. <input checked="" type="checkbox"/> Basic national fee ..... \$300  |  | \$ 300.00   |                  |
| 22. <input checked="" type="checkbox"/> Examination fee<br>If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4) ..... \$100<br>All other situations ..... \$200   |  |   |                  |
| 23. <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... \$100<br>International Search Report prepared and provided to the Office ..... \$400<br>All other situations ..... \$500  |  | \$ 200.00   |                  |
| <b>TOTAL OF 21, 22 and 23 =</b>   |  | \$ 1,000.00   |                  |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.  |  |   |                  |
| Total Sheets  | Extra sheets                                       | Number of each additional 50 or fraction thereof (round up to a whole number) |                  |
| 17 - 100 =  | /50 =  | x \$250.00  |                  |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).   |  | \$ 130.00   |                  |
| CLAIMS  | NUMBER FILED                                       | NUMBER EXTRA  | RATE             |
| Total claims  | 9 - 20 =   | 0   | x 50.00 \$ 0.00  |
| Independent claims  | 2 - 3 =  | 0   | x 200.00 \$ 0.00 |
| MULTIPLE DEPENDENT CLAIM(s) (if applicable)   |  | + 360.00  | \$ 360.00        |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>  |  | \$ 1,490.00   |                  |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.  |  | \$  |                  |
| <b>SUBTOTAL =</b>   |  | \$ 1,490.00   |                  |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).  |  | \$  |                  |
| <b>TOTAL NATIONAL FEE =</b>   |  | \$ 1,490.00   |                  |
| Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property   |  | \$  |                  |
| <b>TOTAL FEES ENCLOSED =</b>  |  | \$ 1,490.00   |                  |
|   |  | Amount to be refunded: \$   |                  |
|   |  | Amount to be charged: \$  |                  |
| <p>a. <input checked="" type="checkbox"/> A check in the amount of \$ 1,490.00 to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-2448. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> |  |   |                  |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the International Application to pending status.   |  |   |                  |
| SEND ALL CORRESPONDENCE TO:   |  |   |                  |
| <br>SIGNATURE: Gerald M. Murphy, Jr.<br>NAME  |  |   |                  |
| CUSTOMER NUMBER: 02292<br>April 28, 2005<br>GMM/nl  |  |   |                  |
| 28,977<br>REGISTRATION NUMBER   |  |   |                  |